SPATIAL DATA SYSTEMS, INC.

Dear Sir:

At your request I am enclosing our brochure on our Model 501 Three-Dimensional Plotter.

The Model 501 operates from punched paper tape or IBM compatible magnetic tape. We can also supply control units to interface with most computers.

We recently announced that we can provide plotting services using the demonstration plotter at our plant at a nominal charge. I will be glad to send you further details at your request.

The Model 501 sells for $9500 ready to operate from a punched paper tape or magnetic tape reader. Delivery is 90 days from receipt of your order.

Thank you for your interest in our product and I look forward to hearing from you further in regard to your application of our plotter.

Very truly yours,

SPATIAL DATA SYSTEMS, INC.

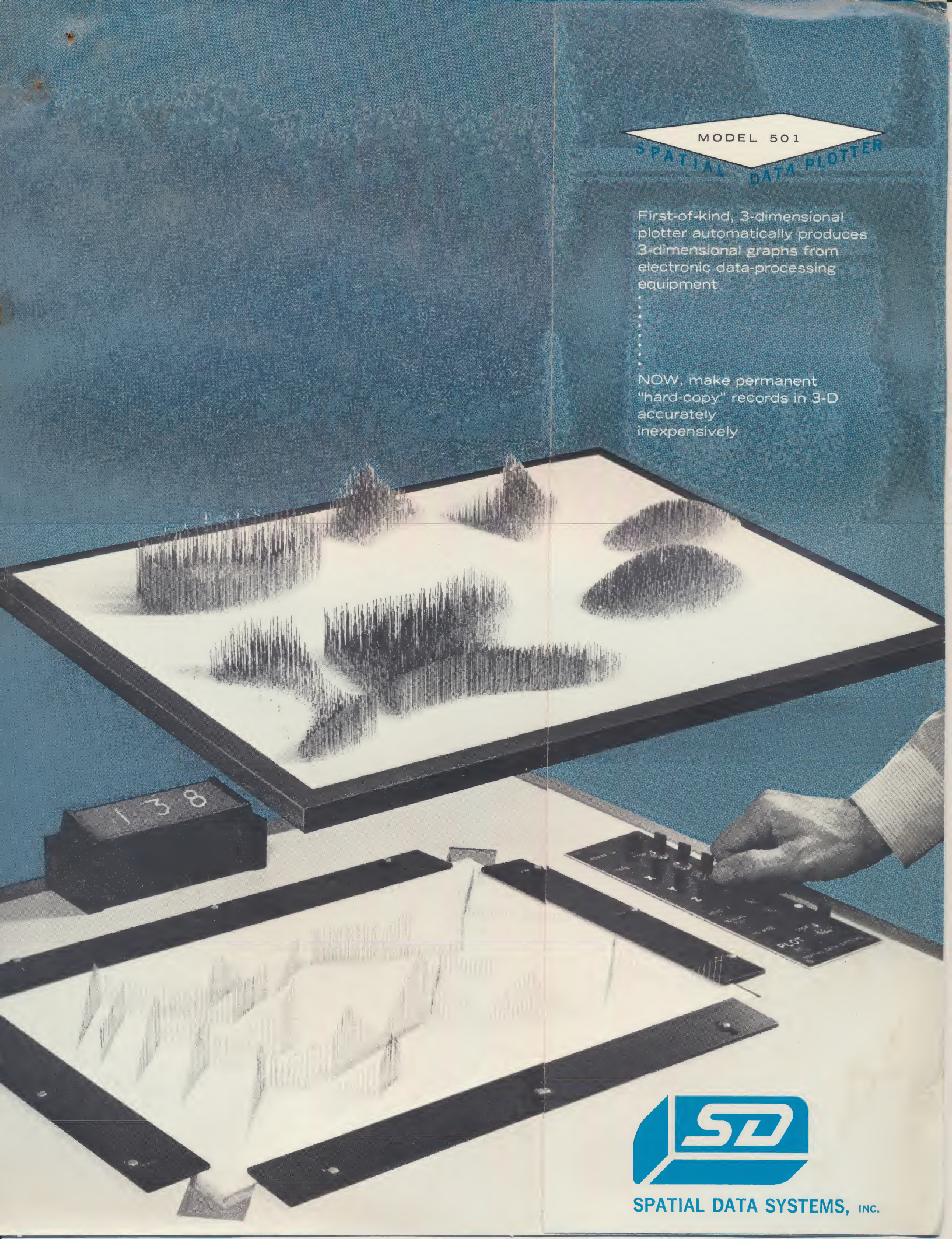
David Rutland

David Rutland
President

DR:br

Encls.

108 A Aero Camino, Goleta, California 93017 • Telephone (805) 968-2816


MODEL 501
SPATIAL DATA PLOTTER
First-of-kind, 3-dimensional plotter automatically produces 3-dimensional graphs from electronic data-processing equipment
NOW, make permanent "hard-copy" records in 3-D accurately inexpensively
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SPATIAL DATA SYSTEMS, INC.

MODEL 501

SPATIAL DATA PLOTTER

GENERAL DESCRIPTION:

Spatial Data Plotter, Model 501, offers a dramatic new method to produce, for the first time, multi-purposed three-dimensional graphs from automatic data-processing equipment.

The fully self-contained unit — a true three-dimensional plotter — accurately constructs, under digital control, a physical representation of 3-D data which is visible from any angle.

Graphs may be produced in quantity, each representing different data; are easily lifted from plotter for reference work or permanent-record storage.

The Spatial Data Plotter, in response to information received from a data source, automatically drives steel wire vertically through light-weight plotting board. Wire is cut flush with bottom side of board. Surface position of wire on board represents X and Y input data. Length of wire projecting from face of board graphically represents Z input data. Top end of wire represents one point of a curve or surface. Thus, by repeatedly inserting wires, a completed curve or surface is generated.

An exclusive, permanent "hard-copy" 3-D record . . . achieved only with the Model 501!

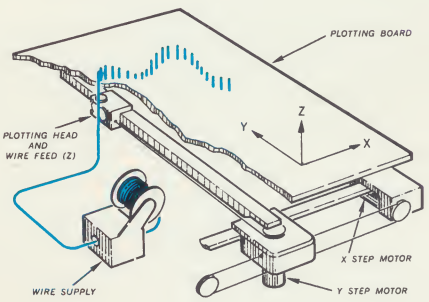
SUMMARY OF OPERATION:

Model 501 Spatial Data Plotter is comprised of digital X-Y positioning mechanism, plotting board, plotting head, wire supply and electronic control housed in attractive steel cabinet. Plotting head contains a step motor and a wire cutter.

Operationally, the head is positioned under the plotting board by step motors on X-Y mechanism. When plotting head is in proper position its step motor drives the correct length of wire through graph board. A solenoid-operated wire cutter then cuts wire flush with bottom of board. X-Y step motors move plotting head to next position, and the cycle repeats.

An internal supply feeds wire to the plotting head; operates on demand. The wire is supplied on a replaceable reel, is straightened by a rotary mechanism as it is drawn from the spool.

Design-wise, the Model 501 operates to receive data in incremental form from eight-level punched paper tape. First six levels represent increments in ±X, ±Y, and ±Z. Increments in X and Y operate X and Y step motors directly. Z increments are accumulated in control unit until seventh-level code or plot command is received. Control unit stops tape reader, advances Z-step motor the number of steps equal to accumulated Z value plus thickness of plotting board. Proper length of wire then projects from top surface of board. The control operates cutter solenoid; starts tape reader. Cycle repeats until all points are plotted. An eighth-level code signifies end of the plot, stopping the plotter.



SPECIFICATIONS:

Plotting Volume:	11 by 17 by 2 inches
Resolution on all axes:	0.01 inches
Plotting Speed X and Y:	300 steps per second
Z:	500 steps per second
Average Plotting Speed:	Over 120 points/min.
Data Input (from auxiliary photoelectric tape reader):	8 bit codes, 300 per second
Wire Supply:	0.022 in. diameter steel wire on 10 lb. reels
Power:	105/130 volts, 60 cycles, 500 watts
Cabinet:	Steel with Formica Top 29 ins. deep, 48 ins. wide, 42 ins. high
Shipping Weight:	Approx. 400 lbs.
Console Writing Surface:	24 by 22 ins.

Accessories:
Specially-finished plotting boards are available in quantity, also, plotting wire on expendable 10-lb. spools.

Software:
Included with the Model 501 package is a special Fortran program PINPLOT. This program: (1) Prepares magnetic tape image of punched paper tape in increment format from an array of input data. (2) Provides for scaling data. (3) Adjusts point spacing.

Your converter then prepares punched paper tape from magnetic tape.

TYPICAL APPLICATIONS:

The Spatial Data Plotter displays mathematic functions or empirical data involving any three variables. Plot data directly — without interpolating contours, without fitting to rectangular grid! Place your data point anywhere on the board within resolution of positioning mechanism! Ideal for:

Aerospace
- True time flight paths
- Fuel vs. Time and Distance
- Vibration and Stress Analysis

Relief Mapping
- Earth or Moon Surface
- Ocean Floor
- Geological Strata
- Population Density
- Natural Resources
- Magnetic Field

Business and Economics
- Geographical Sales
- Inventory by Type and Size
- Quality Control Statistics
- Economic Factors

Civil Engineering
- Highway Grading
- Highway Intersections
- Aqueducts and Canals

Mathematical Analysis
- Vibration and Shock
- Antenna Patterns
- Electrostatic Fields
- Wave Motion

Scientific Research

Meteorology
- Wind Patterns
- Barometric Pressure Maps
- Temperature
- Cloud Cover

OR — you name it!

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REPRESENTED BY: _____